



INITIATIVE 2: IMPROVE SERVICE PLANNING

PRACTICES IN OTHER AREAS AND POTENTIAL MA IMPROVEMENTS

Massachusetts is a dynamic place. People change where they live, where they work, and the places they travel to. Some places compete better than others, and as a result, some places become more attractive, other places become less attractive, and new areas develop. Newcomers continue to arrive, and existing residents continue to move around—many to other states. The state's residents are also aging.

All of these changes affect the demand for transit. As a result, to provide the best service possible, the transit services that the RTAs provide must also change to reflect demand. Between 2001 and 2010, total RTA ridership declined by 8.7%. This suggests that changes to RTA services have not kept pace with changes in demand. As described below, only four of the state's RTAs comprehensively evaluated their services over the past decade. Others conduct more in-depth planning reviews for specific routes or communities, occasionally survey the public, monitor service quality, or evaluate a particular issue (e.g. on time performance). But, most only loosely track performance on an ongoing basis. As a result, the reasons for the ridership declines are not clear.

In terms of needs, the RTAs, through the MA Association of Regional Transit Authorities (MARTA), undertook an effort in 2004 and 2005 to “identify and prioritize the transit needs of the RTAs, establish a baseline of service standards in line with the specific demographic characteristics of each district and to provide a phased implementation strategy for meeting these needs.” However, this Massachusetts Statewide Transit Needs Plan¹ was conducted at a very macro level, and reviews of the results were mixed. This was largely because the macro-level approach did not provide for the analysis or identification of needs at the local level.

With limited information on the effectiveness of existing services and a lack of consensus on the 2005 Transit Needs Plan, there is currently little agreement on how well RTAs are currently meeting needs, or on the effectiveness of existing services. This initiative is intended to set forth an approach through which MassDOT and the state's RTAs can more accurately determine needs and assess the performance of existing services. With that foundation, MassDOT and the RTAs can then work toward addressing funding issues.

BEST PRACTICES

Throughout the country, the most common and widely accepted approach to determine needs and update service is to conduct **Comprehensive Service Analyses**, or CSAs. These studies consist of an evaluation of current and short-term market demand and the development of service changes to better serve those needs.

A second method is through the use of **Ongoing Service Evaluations**. Through the use of these processes, services are evaluated on an ongoing basis rather than a periodic basis as with CSAs. One limitation to these ongoing service evaluation processes is that they focus almost exclusively on the effectiveness of existing services, whereas CSAs address both need and effectiveness.

¹ Urbitran, April 2005



Many states and regions have implemented other types of performance evaluation processes that contain elements of CSAs and ongoing service evaluations. These methods are described in the following sections.

COMPREHENSIVE SERVICE ANALYSES

CSAs,² which entail a comprehensive examination of market demand and services, consist of:

1. A market analysis that assesses the demand for transit service to, from, and within the service area
2. A detailed evaluation of the performance of existing routes and services
3. The development and evaluation of alternative service scenarios
4. The development of recommended changes to better align services with market demand.

CSAs are nearly always conducted at the local level; needs vary greatly among areas and statewide efforts such as the 2005 Massachusetts Transit Needs Plan are nearly always too broad-brushed to produce results that will be widely accepted. This is especially the case in Massachusetts, where the approaches of the state's RTAs vary greatly from area to area. For example, in more traditional urban areas, such as Lowell and Brockton, the emphasis is on traditional fixed-route service. In more rural areas such as the Montachusett region and Cape Cod, the major focus is on brokering Human Service Transportation trips. In other areas, such as MetroWest, there is a more balanced approach between fixed-route and demand response service. On Cape Cod and the Islands, there is a heavy emphasis on tourist-oriented services.

Throughout the country, some transit agencies never conduct CSAs, some conduct them occasionally, and others conduct them on a regular basis. Periodic reviews are often in response to problems such as funding reductions or community criticism, or due to an internal belief that service could be better. In Massachusetts, most RTAs have either never or only occasionally conducted CSAs, and only four RTAs conducted CSAs or similar studies in the 2000s:³

CCRTA (partial):	2009
GATRA:	2008
WRTA:	2005
LRTA	2002

The major goal of a CSA is to determine how to provide better service within existing funding levels. In Massachusetts, three of the four RTAs that conducted CSAs in the last decade experienced ridership increases following the implementation of recommended changes.⁴ Throughout the country, most CSAs are oriented toward determining how to improve service for existing customers and attract new riders.⁵

State/Regional Comprehensive Service Analyses

Transit systems that conduct CSAs regularly do so to ensure that their services are as effective as possible. In addition, to improve the provision of transit service and ensure effective use of funds, many states and regions require transit systems to conduct regular CSAs as a condition for the receipt of state funds.

² CSAs are often conducted using different names such as Comprehensive Operations Analysis (COA), Short Range Transit Plan (SRTP), and Transit Development Plan (TDP), as well as more unique names.

³ PVTA and SRTA are planning to conduct CSAs in 2012.

⁴ The one exception was LRTA, where the transit plan was designed to shift the system's hub from downtown to Lowell's train station. The resulting ridership declines indicate that this shift did not work as well as planned.

⁵ Exceptions are when CSAs are conducted to determine how to reduce service levels in response to funding reductions.



Florida

The Florida Department of Transportation (FDOT) requires that transit systems conduct Transit Development Plans every five years to “support the development of an effective multi-modal transportation system for the State of Florida.” State law requires that TDPs be developed as each transit system’s planning, development and operational guidance document. They are also intended to serve as strategic planning documents that:

- Define public transportation needs.
- Solicit broad input by coordinating with other plans.
- Involve substantial public participation, and explore community goals with decision makers and other stakeholders.
- Define alternative courses of action.
- Develop a systematic plan and monitoring program.

As stated in FDOT’s *Guidance to Producing a Transit Development Plan*, “While required by FDOT, the greatest value from the TDP planning effort, gathered data, and resultant documents occurs when an agency uses the TDP to serve the local area and the traveling public by providing a logical, comprehensive basis for exploring near and mid-term public transit needs and opportunities.”

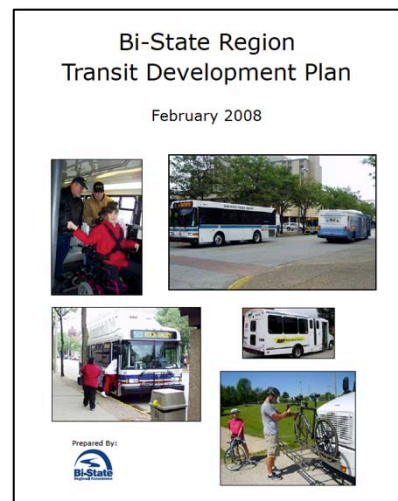
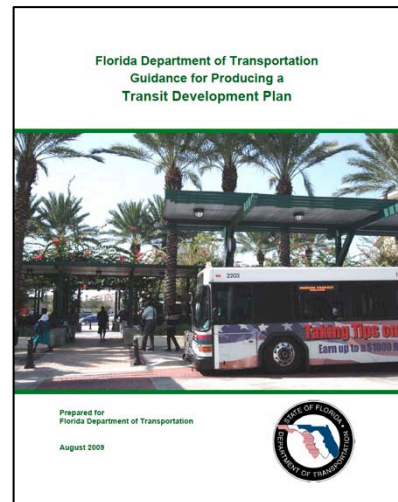
The preparation of TDPs is a prerequisite to receipt of state funds. Local transit systems are responsible for funding and conducting the studies. FDOT provides technical assistance in preparing TDPs, and uses the plans to develop its statewide five-year Work Program, the Transportation Improvement Program, and the Department’s Program and Resource Plan.

Iowa/Illinois Bi-State Region

The Iowa/Illinois Bi-State Region (the Quad Cities area) produces a Greater Bi-State Region Transit Development Plan that is a coordinated effort to provide information, guidance, and priorities for passenger transportation. The purpose of the plan is “to provide a framework for efficient and effective transit services related to resource allocation, service development, coordination of services, and addressing gaps or service needs.” The TDP includes:

- A profile of the characteristics of the Greater Bi-State Region.
- An assessment of passenger transportation providers within the Greater Bi-State Region.
- The identification of the extent of services, needs, and gaps.
- A summary of coordination among bi-state services and modes, including Human Service Transportation.
- An evaluation of needs and policy direction.
- A prioritization strategy for meeting the mobility needs of the Greater Bi-State Region.

Both the Iowa and the Illinois Departments of Transportation require the regional TDP. The Greater Bi-State Regional TDP complements each state’s individual planning efforts.



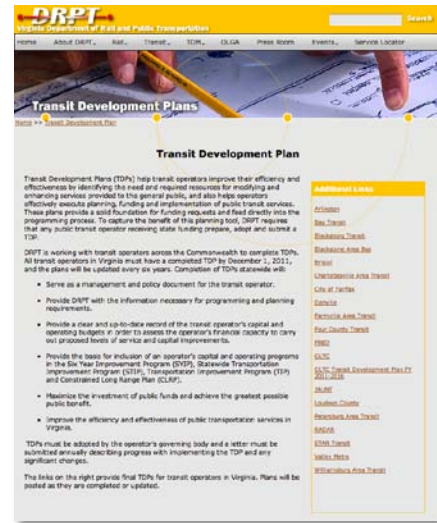


Virginia

The Virginia Department of Transportation's Department of Rail and Public Transit (DRPT) requires that all transit operators that receive state funds produce a Transit Development Plan (TDP) every six years. The TDPs are intended to serve as a management and policy document for the transit operator and identify ways to improve efficiency and effectiveness. The plans also aid operators in effectively executing planning, funding and implementation of public transit services.

For the state, the TDPs are used to:

- Provide DRPT with the information necessary for programming and planning requirements.
- Provide a clear and up-to-date record of each transit operator's capital and operating budgets to assess the operator's financial capacity to carry out proposed levels of service and capital improvements.
- Provide the basis for inclusion of an operator's capital and operating programs in the Six Year Improvement Program (SYIP), Statewide Transportation Improvement Program (STIP), Transportation Improvement Program (TIP) and Constrained Long Range Plan (CLRP).
- Maximize the investment of public funds and achieve the greatest possible public benefit.
- Improve the efficiency and effectiveness of public transportation services in Virginia.

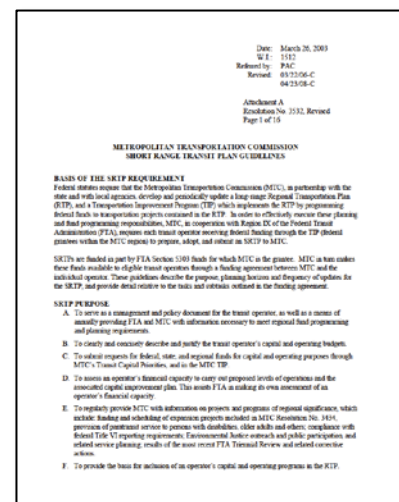


DRPT funds the TDPs and works with transit operators to conduct them. The operator's governing body must adopt the TDPs and a letter must be submitted annually to the DRPT that describes the implementation progress and any major changes.

San Francisco Bay Area

The Metropolitan Transportation Commission (MTC), which is the Bay Area's MPO, requires that transit systems conduct a Short Range Transit Plan (S RTP) every five years as a condition for receiving the federal and state funds that MTC distributes. The S RTPs provide the fundamental basis for determining service and funding needs. In summary, the S RTPs are intended to:

- Serve as a management and policy document for the transit operator, as well as a means of annually providing FTA and MTC with information necessary to meet regional programming and planning requirements.
- Clearly and concisely describe and justify the transit operator's capital and operating budgets.
- Submit requests for federal, state, and regional funds for capital and operating purposes through MTC's Transit Capital Priorities, and in the MTC TIP.
- Assess an operator's financial capacity to carry out proposed levels of operations and the associated capital improvement plan. This assists FTA in making its own assessment of an operator's financial capacity.
- Regularly provide MTC with information on projects and programs of regional significance, which include: funding and scheduling of expansion projects, provision of paratransit service to persons





with disabilities, older adults and others; compliance with federal Title VI reporting requirements; Environmental Justice outreach and public participation, and related service planning; results of the most recent FTA Triennial Review and related corrective actions.

- Provide the basis for inclusion of an operator's capital and operating programs in the RTP.

The Bay Area's SRTPs are funded in part through the use of FTA Section 5303. Full SRTPs must be conducted every four years, and "mini" SRTPs must be completed annually. The mini SRTPs provide the basic information needed by MTC for its annual funding distributions.

Washington

By Washington statute, all transit systems must annually produce a Transit Development Plan and Annual Report. The TDPs must contain:

- A system overview that describes the organization, physical plant, service characteristics, and service connections.
- Major activities that the transit system undertook in the previous year.
- Planned strategies for the next six years, including a description of how the strategies align with Washington State Department of Transportation (WSDOT) goals.
- Planned activities for the next six years.
- A Capital Improvement Program for the next six years.
- Operating data for the prior year and projections for the next six years.
- Detailed inventories of facilities, fleet, and equipment.

WSDOT compiles the information in the TDPs to present an overview of transit service and needs to the Washington State Legislature. The TDPs also describe projects of regional significance to be included in regional Transportation Improvement Programs, the State Public Transportation Plan, the statewide Multimodal Transportation Plan, and federally required metropolitan transportation plans.

ONGOING SERVICE EVALUATIONS

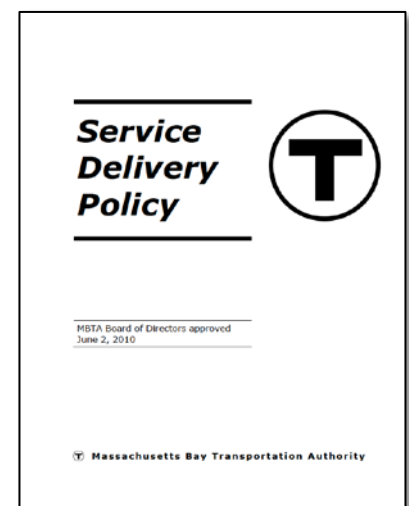
In addition to, or in lieu of CSAs, some transit systems have implemented ongoing service evaluations. These processes are designed to evaluate the effectiveness of service on an ongoing, rather than periodic, basis.

Massachusetts Bay Transportation Authority (MBTA), Boston

In Massachusetts, the MBTA has an ongoing service evaluation that consists of two components:

1. An on-going evaluation and implementation of incremental service changes that occur on a quarterly basis.
2. A two-year planning cycle for development of the biennial Service Plan, which can include major restructuring of existing routes and proposals for new services.

These activities are defined in the MBTA's *Service Delivery Policy*, which is designed to ensure that the MBTA provides quality transit services that meet the needs of the riding public and are consistent with the MBTA's enabling legislation and other external mandates, such as Title VI of the Civil Rights Act of 1964. The Service Delivery Policy:





- Presents service objectives that define the key performance characteristics of quality transit services.
- Identifies quantifiable Service Standards that are used to measure whether or not the MBTA's transit services achieve the Service Objectives and to evaluate whether MBTA services are provided in an equitable manner (as defined by Title VI).
- Outlines a Service Planning Process that applies the Service Standards in an objective, uniform, and accountable manner.
- Involves the public in the Service Planning Process in a consistent, fair and thorough manner.

The biennial Service Plan reviews service performance and usage of transit services and recommends service changes based on consumer demand. Performance measures include ridership, passenger load per vehicle, schedule reliability, and other factors.

Merrimack Valley Regional Transit Authority (MVRTA), MA

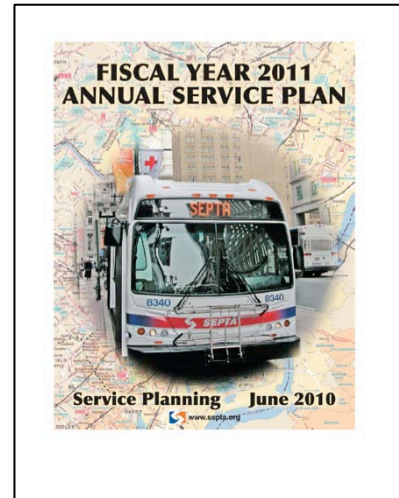
The Merrimack Valley Regional Transit Authority (MVRTA) is the one Massachusetts RTA that uses a formal service evaluation process. MVRTA evaluates its routes on a passenger per revenue vehicle mile and passenger per revenue vehicle hour basis. For each of these measures, MVRTA establishes minimum performance levels at 50% of the system average. Routes that fall below this level are then reviewed using ridership and service data, and passenger surveys are sometimes conducted. Actions that are taken to improve route performance include marketing, alignment and schedule changes, and changes to or discontinuation of individual segments. MVRTA also evaluates whether alternative services could be provided, as well as whether service should be discontinued.

Southeastern Pennsylvania Transportation Authority (SEPTA), Philadelphia, PA

In Philadelphia, the Southeastern Pennsylvania Transportation Authority (SEPTA) evaluates the performance of each of its bus routes on an annual basis based on an operating ratio, or farebox return. For performance to be considered as acceptable, the route's operating ratio must be at least 60% of the system average. Similar to the MBTA's process, routes that perform below acceptable levels are examined to determine whether changes can be made to improve performance. These changes include targeted marketing, realignment, consolidation, and discontinuance.

SEPTA also evaluates and weighs requests for new services against non-performing services—in other words, non-performing services will be discontinued in order to implement new services that would perform more effectively.

The development of an Annual Service Plan provides the framework for the annual service evaluation process. The Annual Service Plan describes the performance of individual services, and identifies incremental changes that are designed to achieve specific service goals and objectives, and opportunities for cost-effective service expansion. The plan is prepared at the same time each year and follows a defined process that includes municipal and public input.



Port Authority of Allegheny County, Pittsburgh, PA

As a result of its 2009 Transit Development Plan, the Port Authority of Allegheny County developed and formally adopted an ongoing service evaluation process. The ongoing evaluation process was based on the MBTA process with changes to meet local needs.



OTHER STATEWIDE PLANNING EFFORTS

A variety of other statewide efforts address service and performance in other ways. In most cases, these efforts are similar to those conducted as part of CSAs.

California

California requires that Regional Transportation Planning Entities conduct a triennial performance audit of local transit systems. The performance audits are a systematic process of evaluating an organization's effectiveness, efficiency and economy of operation under management control, and are intended to:

- Provide management with useful information to assess past activities and provide insight for future planning efforts.
- Provide management with a review and evaluation of an agency's organization and operations.
- Present an opportunity to utilize auditor expertise, which can supplement staff work.
- Assure accountability for the use of public funds.

The performance audits also verify a number of key performance indicators, including:

- Operating cost per passenger
- Operating cost per vehicle service hour
- Passengers per vehicle service hour
- Passengers per vehicle service mile
- Vehicle service hours per employee

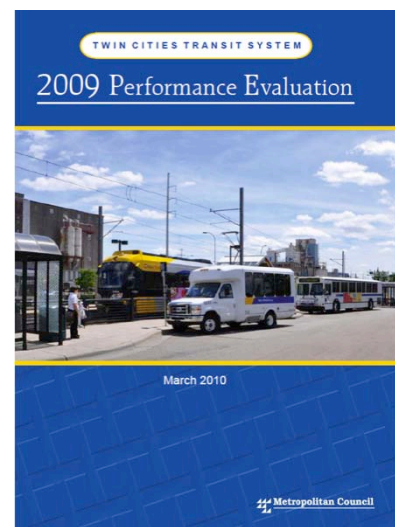
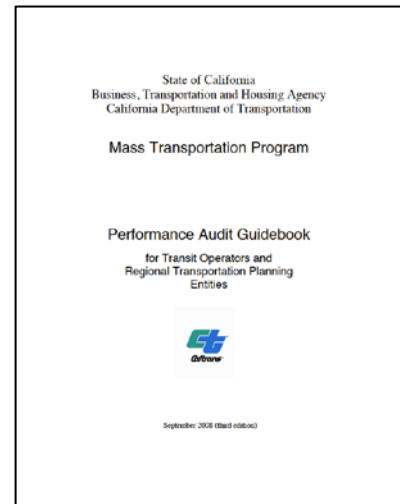
The Regional Transportation Planning Entity is responsible for ensuring that a performance audit is conducted and selecting the auditors. The Regional Transportation Planning Entities fund the audits.

Minnesota

In the Twin Cities area, state statute requires the Metropolitan Council (the MPO) to perform an evaluation of the Twin Cities transit system every two years. The evaluation includes:

- A description of the regional transit system
- Demographic trends
- Regional transit ridership and operating statistics
- Peer region comparisons
- Peer agency modal analysis
- A funding analysis
- A capital plan
- Information on major initiatives

Outside of the Twin Cities, the Minnesota Department of Transportation's (Mn/DOT) Office of Transit conducts a screening of the performance of approximately ten of the state's transit systems each year. These "Transit System Evaluation Project" reviews are





conducted by Office of Transit staff, MnDOT District Transit Project Managers and financial auditors. The goals of these evaluations are to identify best practices in rural transit operations and to assist systems to improve efficiency and effectiveness in service delivery. The areas that are reviewed include:

- Organizational structure
- Personnel
- Risk management and staff training
- Trip making
- Public information and marketing
- Drug and alcohol compliance
- Vehicles and maintenance

Office of Transit staff members also assist rural agencies in developing standards to meet state performance standards for the different types of service provided.

Pennsylvania

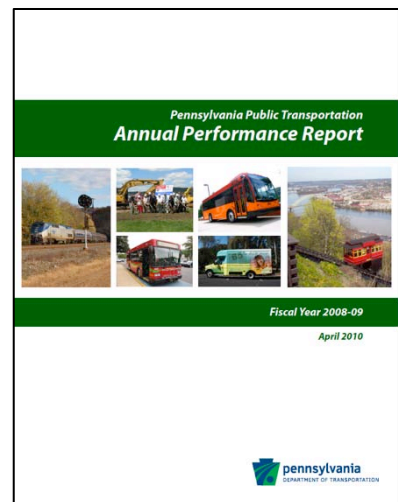
In 2008, Pennsylvania significantly reformed the way it funds transit. The backdrop for the changes was a 2006 Transportation Funding and Reform Commission (TFRC) study which concluded that too many systems were underperforming. It also concluded that the “historical funding basis” that the state used tended to ignore changing patterns of development and encouraged a very static transportation system. In 2007, as a result of the TFRC’s work, Pennsylvania enacted Act 44, which shifted its funding distribution to a performance-based system.

While the legislation did not require that transit systems conduct any specific planning to improve performance, the ridership components of the funding formula did produce that effect. For example, in Pittsburgh, where performance lagged that of other transit systems, the Port Authority estimated that it would not receive an increase in funding for many years unless it implemented changes to improve ridership and productivity. The passage of Act 44 was directly responsible for the Port Authority undertaking its Connect '09 TDP that completely transformed and improved service, and the development of its ongoing service evaluation process.

At the statewide level, as also required by Act 44, the Pennsylvania Department of Transportation (PennDOT) compiles and publishes an Annual Performance Report that presents the “state of the industry” to Pennsylvania’s citizens and elected officials. This document addresses:

- Changing circumstances influencing ridership, costs and other performance factors
- Trends in levels of service, the cost of service, ridership and funding
- Major accomplishments
- New initiatives
- A preview of the challenges and opportunities that will help shape the future agenda for those that financially support, provide, or use public transportation services in Pennsylvania.

It also presents profiles and service statistics for each of the state’s public transit operators.





POTENTIAL MASSACHUSETTS SERVICE PLANNING IMPROVEMENTS

Summary of Issues

There is a very large range of viewpoints among RTAs, other stakeholders, and MassDOT related to the effectiveness and efficiency of the services that are now being provided by the RTAs, and the magnitude of unmet needs. There are also a variety of viewpoints on desired outcomes:

- Some RTAs believe that they already serve their communities as effectively and efficiently as possible given current funding levels; more rigorous analysis would divert funds that would otherwise be used to provide service.
- Other RTAs believe that more comprehensive analyses should be conducted to determine how to improve service (PVRTA and SRTA are both planning to conduct CSAs in 2012).
- Most outside stakeholders believe there are opportunities for RTAs to provide service that better meets current needs.
- MassDOT desires to be able to better assess and determine need in order to ensure the most effective use of available funding.

Because very little formal service analysis is or has been conducted at either the local or state level, neither MassDOT nor the RTAs have been able accurately measure effectiveness and efficiency or convincingly demonstrate unmet needs. As a result, it is challenging to have an objective discussion on how effective the services provided by the RTAs are compared to how effective they could be.

There are also a number of areas of consensus:

- All RTAs do want to provide the best service possible and desire the ability to provide more.
- All parties desire a funding process that is more strongly tied to needs.
- All parties agree that needs should primarily be determined at a local level (with statewide needs then determined based on local needs).

Given the above, key issues to be addressed include:

- Implementation of a method to better assess and measure existing RTA services. Available information also indicates that RTAs should become more aggressive at modifying their services to better meet changes in passenger demand.
- More convincingly documentation of unmet needs within each RTA area, and an estimate of the cost of meeting these needs.
- Development of a process to compile local (RTA) needs into a statewide program that is better designed to address these needs.

Actions to Consider

Potential improvements—for discussion at the February workshop—that could address these issues include:

1. Development of a formalized CSA process in which all RTAs would comprehensively examine their services every four to six years.
 - Would there be agreement on this?
 - What elements should be included?
 - How would they be funded?



2. What is needed to convincingly demonstrate unmet needs?
 - Market analysis?
 - Ridership and cost estimates?
 - Community support?
 - Other?
3. What should be done on an annual basis?
 - Ongoing service evaluation process?
 - Simpler compilation of basic performance data? What elements would be appropriate?
 - Consideration of service expansion requests?
4. How should MassDOT assess and prioritize needs on a statewide basis?
 - Compare costs and effectiveness of individual proposals?
 - Maintain existing services?
 - Provide service to new areas?
 - Improve existing services?
 - Focus on providing a basic level of service?
 - Focus on areas where demand is greatest?
 - Through RTA Council?



FOR MORE INFORMATION

California Performance Audits:

www.dot.ca.gov/hq/MassTrans/Docs-Pdfs/PAGBookFinalPub.pdf

California Short Range Transit Plan Guidelines:

www.mtc.ca.gov/funding/FTA/downloads/SRTP_Guidelines_rev_042308.pdf

Florida TDP Requirements:

planfortransit.com/wp-content/TDP_Materials/Current_TDP_Rule.pdf

Florida TDP Guidebook:

planfortransit.com/resources/download_center/?did=56

Iowa/Illinois Bi-State Region Transit Development Plan:

web1.ctaa.org/webmodules/webarticles/articlefiles/08_QuadCities_RegionalCoordinationPlan_20090309.pdf

Massachusetts Bay Transportation Authority (MBTA) Service Delivery Policy:

mbta.com/uploadedfiles/About_the_T/T_Projects/T_Projects_List/2010ServiceDeliveryPolicy.pdf

Pennsylvania Annual Performance Report:

<ftp://ftp.dot.state.pa.us/public/bureaus/PublicTransportation/GeneralInformation/BPT%20Annual%20Report%20FINAL%202008-09.pdf>

San Francisco Bay Area Short Range Transit Plan Guidelines:

www.mtc.ca.gov/funding/FTA/downloads/SRTP_Guidelines_rev_042308.pdf

Southeastern Pennsylvania Transportation Authority FY 2011 Annual Service Plan

www.septa.org/reports/pdf/asp11.pdf

Southeastern Pennsylvania Transportation Authority Service Standards and Process

www.septa.org/reports/pdf/standards.pdf

Virginia Transit Development Plans:

www.drpt.virginia.gov/activities/transitdevplan.aspx